



Department of  
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### Editorial

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Welcome to the first edition of the *Mount Royal Undergraduate Education Review*. Our hope is to publish two issues each academic year that focus on the academic journey of teacher candidates in Mount Royal University's Bachelor of Education program.

This first edition celebrates the work of 2<sup>nd</sup> year teacher candidates in the *Understanding Current and Emerging Pedagogical Technology* course during the winter 2014 semester.

Students in this course completed an inquiry-based learning project that investigated the impact of digital technologies in elementary education. They used Garrison, Anderson and Archer's (2000) Practical Inquiry (PI) model to guide their research studies. The PI model consists of four phases, which are described in Table 1.

Table 1

#### *Practical inquiry phases*

Description	Category/Phase	Indicators
The extent to which students are able to construct and confirm meaning through sustained reflection, discourse,	1. Triggering event	1. Inciting curiosity and defining key questions or issues for investigation

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and application within a critical community of inquiry.	2. Exploration	2. Exchanging and exploring perspectives and information resources with other learners
	3. Integration	3. Connecting ideas through reflection
	4. Resolution/application	4. Applying new ideas and/or defending solutions

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The teacher candidates selected their own question for inquiry, based on their own interests and previous K to 6 school placement experiences. They posted their initial questions to their personal blogs (*Blogger*) and then received feedback from their peers and the course instructor.

In terms of exploration, the students completed an annotated bibliography in *Google Docs* and the Government of Canada's online Human Ethics Research Certificate. They then created a research plan in *Google Docs*, which guided their collection of data, primarily in the form of online surveys and face-to-face interviews.

The teacher candidates analyzed their data using spreadsheet and word cloud applications such as *Google Spreadsheets*, *Wordle*, and *Tagxedo*. They then visited the Calgary Board of Education's (CBE) Innovation and Learning Centre to discuss their preliminary findings with CBE Learning Consultants. Based on these discussions, the students created digital stories using a variety of applications such as *iMovie*, *Prezi*, *PowerPoint*, and *YouTube* to represent and synthesize their initial findings.

After a peer review process, the students revised their digital stories and presented them at the Mount Royal University (MRU) Student Research Day. Discussions with other MRU

students and faculty during these presentations led to further insights and resources that the teacher candidates then incorporated into their final research manuscripts that documented their inquiry-based projects.

Some of the teacher candidates submitted their manuscripts to the Mount Royal University Library Research Paper Competition for further review and an opportunity to win a thousand dollars. Another, twelve teacher candidates were interested in publishing their research studies and they continued to revise and provide peer feedback on each other's manuscripts, after the course had been officially completed. This inaugural edition of the *MRU Education Review* highlights these twelve research manuscripts.

The first paper in this special issue, "Inquiry based learning and technology negative or positive?" explores the implementation of inquiry based learning (IBL) and digital technologies in an elementary school setting. The aim of this research study was to discover what issues elementary teachers are having with inquiry based learning and whether or not digital technologies were playing a positive or negative role in the IBL process. Several practicing teachers commented that an IBL approach to learning required a lot of preparation and that without proper support it was often easier to use just worksheets and textbooks with students.

The next two articles investigate the connection between student engagement and digital technologies. The article entitled "The relationship between student engagement, teacher proficiency, and technology" demonstrates that teacher proficiency with technology is critical when it comes to engaging students through the use of digital technologies in the classroom. The author recommends that professional development is essential for both teacher candidates and practicing teachers, as the use of digital technologies in the elementary classroom is increasing. The other article "Technology as a resource: Increasing engagement in learning and developing

21<sup>st</sup> century skills” examines how digital technologies not only engage students but how they influence the development of a 21<sup>st</sup> century learner. The author concludes that digital technologies have the potential to help students become self-directed learners, access and evaluate information through critical thinking and solving data to become more engaged thinkers, which may contribute to leadership and collaboration skills.

The fourth and fifth research manuscripts examine the role that digital technologies play in outdoor education (OE). These articles on “The benefits and drawbacks of using technology in outdoor education” and “Using technology to engage students in outdoor education: Does it inhibit or benefit the students’ experience?” both explore the pros of cons of using digital devices in OE. Both articles recommend that digital technologies should be used to intentionally enhance rather than reduce the outdoor experience for students.

The sixth and seventh articles are focused on the role of assistive technologies for students with learning challenges. The article “Technology and disabilities: Why it can help and hinder learning” demonstrates how when assistive technologies are used in a thoughtful and appropriate manner they can be a tremendous asset for inclusive education. The other article “Inquiry based learning and technology, negative or positive?” explores how assistive technologies can benefit students with attention deficit disorder (ADD) and anxiety issues, and that these technologies do not provide them with an unfair advantage over other students, they just help them to have the same success as others.

Articles eight and nine investigate the role that digital technologies play in terms of relationships in elementary education. The article “Is technology more important than friendships: A look into the effects of technology on communication skills and relationship building” examines the impact of digital technologies on face-to-face communication and

relationships. The other article explores “The effects of technology on bullying”. The findings from this study clearly demonstrate that digital technologies have contributed to a rise in cyber bullying and how important it is to provide elementary students with opportunities to learn about and experience the concept of digital citizenship to combat this trend.

The tenth article “Maximizing student experience in mathematics: Traditional tools versus digital technologies” examines the role of digital technologies in the elementary mathematics curriculum. The author’s findings indicate that teachers need to be positive role models and create positive learning experiences for students. In addition, she recommends that teachers first use hands on tools, such as math manipulatives, in order to help students master basic concepts and then use digital technologies as an assistive tool for further clarification and deeper understanding.

The eleventh research manuscript “Equality in education: The digital divide” illustrates that there are discrepancies and inequalities that remain in the Alberta Education system with regards to digital technologies, and as a result, quality education for learners is being affected.

The final article evaluates the impact of digital technologies on parental engagement in elementary education, “A wired connection: Parental engagement and digital technologies”. The findings from this study demonstrate that both parents and teachers believe that digital technologies have improved and positively impacted parent-teacher relationships. These relationships contribute to a home to school, collaborative environment, which translates to student success in the classroom.

## References

Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2-3), 87-105.